Avid Configuration Guidelines
HP Z820 Dual 6-Core / Dual 8-Core / Dual 12-Core CPU Workstation

Joe Conforti – Avid Technology – Aug 8th, 2014

Rev F

1.) HP Z820 AVID Qualified System Specification:

Z820 / AVID Qualified Operating System:

Microsoft® Windows 7 Professional 64-bit Edition with Service Pack 1
Microsoft® Windows 8 Professional / Enterprise 64-bit Edition
Microsoft® Windows 8.1 Professional / Enterprise 64-bit Edition

Z820 Hardware Configuration

Supported CPU Choices

Supported new Gen V2 CPU Choices

- Dual Intel® 6-Core Xeon® E5-2630V2 Processors @ 2.6GHz 15MB cache / 1866MHz memory
  The 6-core Xeon® E5-2640 @ 2.5GHz Processors are qualified for Media Composer 5.5.3.6, Symphony 5.5.3.6 and NewsCutter 9.5.3.6 or later.
  (The 6-Core Xeon® E5-2630 Processors will run the 1866MHz memory at 1600MHz speed due to the speed limitation of the memory controller in the E5-2630V2 Processor).

- Dual Intel® 8-Core Xeon® E5-2650V2 Processors @ 2.6GHz 20MB cache / 1866MHz memory
  The 8-Core Xeon® E5-2650V2 Processors are qualified only for Media Composer 6.x , Symphony 6.x and NewsCutter 10.x or later (The 8-core CPU's are not qualified with Media Composer 5.x , Symphony 5.x or NewsCutter 9.x)

- Dual Intel® 12-Core Xeon® E5-2695V2 Processors @ 2.4GHz 30MB cache / 1866MHz memory
  IMPORTANT NOTE: The dual 12-core configuration requires 32GB of memory. See the memory configuration section for the details.
  The 12-Core Xeon® E5-2695V2 Processors are qualified only for Media Composer 6.5.4 , Symphony 6.5.4 and NewsCutter 10.5.4 or later (The dual 12-core CPU configuration is not qualified with Media Composer 5.x , Symphony 5.x or NewsCutter 9.x)

Supported original Gen CPU Choices

- Dual Intel® 6-Core Xeon® E5-2640 Processors @ 2.5GHz 15MB cache / 1600MHz memory
  The 6-core Xeon® E5-2640 @ 2.5GHz Processors are qualified for Media Composer 5.5.3.6, Symphony 5.5.3.6 and NewsCutter 9.5.3.6 or later.
  (The 6-Core Xeon® E5-2640 Processors will run the 1600MHz memory at 1333MHz speed due to the speed limitation of the memory controller in the E5-2640 Processor).

- Dual Intel® 8-Core Xeon® E5-2665 Processors @ 2.4GHz 20MB cache / 1600MHz memory
  IMPORTANT NOTE: The 8-Core Xeon® E5-2665 Processors @ 2.4GHz 20MB cache are qualified only for Media Composer 6.x , Symphony 6.x and NewsCutter 10.x or higher (The 8-core CPU's are not qualified with Media Composer 5.x , Symphony 5.x or NewsCutter 9.x)

Important Note regarding ISIS Connectivity based on CPU / processor generation:

- The Z820 has 2 embedded NIC ports (82574L and 82579LM).
- If your Z820 is configured with any of the new generation V2 CPU choices then **both** NIC ports can be used for ISIS 5000 / 7000 connectivity.
- If your Z820 is configured with any of the original generation CPU choices then **only the 82574L** NIC port can be used for ISIS 5000 / 7000 connectivity.
- This is covered in more detail in the Embedded NIC / ISIS Connectivity section of this document.

Supported Video Card

1.) NVIDIA K4000 3GB PCI-e video board
2.) NVIDIA Quadro 4000 2GB PCI-e video board

System Disk Drive - 1TB (minimum recommended) SATA-II 3Gb/s 7200RPM

Standard AVID memory configuration: Dual 6-core and Dual 8-core configurations.

16GB (8 x 2GB) DDR3 1866 or 1600 ECC memory –
Gen V2 CPU uses 1866MHz memory, original Gen CPU uses 1600MHz memory
(Requires eight 2GB DIMMs, DIMM sizes cannot be mixed sizes)
2GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM6, CPU0-DIMM8
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM6, CPU1-DIMM8

IMPORTANT NOTE: The dual 12-core configuration requires 32GB of memory. 32GB memory is mandatory for the dual 12-core configuration.

32GB AVID memory configurations (Mandatory for dual 12-core CPU configuration):

A.) 32GB (16 x 2GB) DDR3 1866 or 1600 ECC memory –
Gen V2 CPU uses 1866MHz memory, original Gen CPU uses 1600MHz memory
(Requires sixteen 2GB DIMMs, DIMM sizes cannot be mixed sizes)
2GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM2, CPU0-DIMM3, CPU0-DIMM4,
CPU0-DIMM5, CPU0-DIMM6, CPU0-DIMM7, CPU0-DIMM8
CPU1-DIMM1, CPU1-DIMM2, CPU1-DIMM3, CPU1-DIMM4,
CPU1-DIMM5, CPU1-DIMM6, CPU1-DIMM7, CPU1-DIMM8

B.) 32GB (8 x 4GB) DDR3 18661600 ECC memory –
Gen V2 CPU uses 1866MHz memory, original Gen CPU uses 1600MHz memory
(Requires eight 4GB DIMMs, DIMM sizes cannot be mixed sizes)
4GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM6, CPU0-DIMM8,
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM6, CPU1-DIMM8,

Memory configuration constraints - Memory configurations which use “unbalanced” memory configuration are not recommended or formally supported in AVID environments. Memory configurations which mix and match memory module sizes and locations will result in a poor performing, non-optimal operating environment.

2.) Qualified Operating Systems, Avid Client Editing Applications, Hardware and Shared-Storage support for the HP Z820:

- **Dual 6-Core Xeon® - Minimum Media Composer / Symphony 5.5.3.6 , NewsCutter 9.5.3.6 or later**
- **Dual 8-Core Xeon® - Minimum Media Composer / Symphony 6.x , NewsCutter 10.x or later**
- **Dual 12-Core Xeon® - Minimum Media Composer / Symphony 6.5.4.x , NewsCutter 10.5.4.x or later**

- **Media Composer / Symphony 5.5.x , NewsCutter 9.5.x or later**
  Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)

- **Media Composer / Symphony 7.x , NewsCutter 11.x or later**
  Microsoft® Windows 7 Professional 64-bit Edition with SP1 (SP1 required)
  Microsoft® Windows 8.x Professional / Enterprise 64-bit Edition

- **Not Supported – Any version of Microsoft® Windows XP or Vista**
- **Not Supported - Microsoft® Windows 7 – any 32-bit version, or Home or Ultimate**

Note regarding Service packs:

As of this writing Service Pack 1 is the current Service Pack release for Win7 and is required for Avid software. As future Service Packs are released Avid will evaluate and announce formal support when testing is completed.

3.) Qualified O.S., Hardware and shared storage supported:

	Qualified / Supported
Nitris DX / Mojo DX	Yes
3rd Party Qualified Hardware	See release notes and Avid website for information regarding supported 3rd party hardware (vendor qualified)
ISIS 1Gb Ethernet Client	ISIS 5500 / 5000 , 7500 / 7000 v4.0
ISIS Hi-res (single10Gbit) client Myricom Single-Port 10Gbit	ISIS 5500 / 5000 , 7500 / 7000 v4.0
ISIS Ultra Hi-res client (dual 10Gbit) Myricom Dual-Port 10Gbit	ISIS 5500 / 5000 v4.7
Qualified Operating System	Win 7 Pro 64-bit with SP1 Win 8 64bit Pro or 64-bit Enterprise
1394 Adrenaline DNA	**N/A Not Supported**
1394 Mojo-SDI DNA	**N/A Not Supported**
1394 Mojo-Analog DNA	**N/A Not Supported**

AVID qualified HBA info

AVID qualified HBA	AVID Part Number	Slot Location	Function / Notes
Vendor qualified 3rd party hardware interface requiring: - x4 PCI-E or lesser interface - ½ Length PCI form factor or smaller	Not stocked by AVID	#1	Vendor qualified 3rd party hardware interface. See release notes and Avid website for information regarding supported 3rd party hardware
Vendor qualified 3rd party hardware interface requiring: - x8 PCI-E or greater interface - Full Length PCI form factor	Not stocked by AVID	#4 or #6	Vendor qualified 3rd party hardware interface. See release notes and Avid website for information regarding supported 3rd party hardware
Intel PRO 1000 PT	7030-20139-01	#3	Shared Storage: Unity ISIS Copper Gb-Ethernet Dual Gb ISIS Connectivity. Required only with original generation processors. If your Z820 has the new generation V2 CPU's, then both of the embedded NIC's can be used and this NIC HBA is not required.
Intel i350-T2 – Dual Gb NIC	Not stocked by AVID	#3	Shared Storage: Unity ISIS Copper Gb-Ethernet Dual Gb ISIS Connectivity. Required only with original generation processors. If your Z820 has the new generation V2 CPU's, then both of the embedded NIC's can be used and this NIC HBA is not required.
Intel PRO 1000 PF - ISIS	Not stocked by AVID	#3	Shared Storage: Unity ISIS Optical Gb-Ethernet
Myricom Single-Port 10G-PCIE-8B-S	7030-30041-01	#3	Shared Storage: Unity ISIS 10Gb-Ethernet for Hi-Res client (ISIS 5000 / 7000)
Myricom Dual-Port 10G-PCIE2-8B2-2S	Not stocked by AVID	#3	Shared Storage: Unity ISIS Dual 10Gb-Ethernet for Client v4.7 only (ISIS 5500 / 5000 only) Requires driver minimum 1.1.13 or 1.1.14
Avid HIB, DX Interface HBA**	Active: 7030-30048-02 Active: 7030-30048-01 Active: 7030-20084-01 Passive: 7030-30021-01	#5	Avid DX Hardware Interface HBA
HP Thunderbolt-2 PCIe I/O HBA	Not stocked by AVID HP Option F3F43AA	#5	Thunderbolt devices including video I/O devices, storage solutions etc. http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=c04203028
Atto R680	Not stocked by AVID	#1 or #4	Local SAS Storage Support – Avid VideoRAID ST (5-bay) Xtore StudioRAID 5Ti (5-bay)
HP Z Turbo Drive PCIe Solid State Storage	Not stocked by AVID	Various	See HP link for config info: http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA5-1923ENW
LSI 9200-8e SAS controller	7030-30036-01	#1 or #4	SAS Local Storage: Xtore StudioRAID 16Re (16-bay) chassis Xtore StudioRAID 5Te (5-bay) chassis
Pro Tools hardware		#3 and / or #4	Pro Tools HDX , HDX / HD Native
Red Rocket Accelerator	Not stocked by AVID	#3, #4 or #6	Accelerator for RED files

** ***Avid DX Interface HBA Support Note: (See reference pictures on page 9 of this guide).***

All 4 versions of the DX interface HBA are supported on the Z820 with Media Composer / Symphony and NewsCutter

1) Active DX interface HBA 7030-30048-02
2) Active DX interface HBA 7030-30048-01
3) Active DX interface HBA 7030-20084-01
4) Passive DX interface HBA 7030-30021-01

4.) Slot Configuration:

Slot Configuration Information			
Slot #	Electrical	Mechanical	
1	x4 PCI-E Gen 3	x8 Open-ended Connector	Vendor Qualified 3rd Party Hardware PCI-e Interface requiring: x4 PCI-E or lesser interface / ½ Length PCI form factor or smaller **or** (Secondary slot location) Local SAS Storage controllers: Atto R680 / LSI 9200-8e **or** HP Z Turbo Drive PCIe Solid State Storage HBA
2	x16 PCI-E Gen 3 (225Watts)	x16	Graphics Card: Nvidia K4000 or Quadro 4000
3	x8 PCI-E Gen 3	x16	Shared Storage Controllers ISIS 5000 / 7000: Intel PRO 1000 PT Intel i350-T2 The Intel PRO 1000 PT or Intel i350-T2 HBA's are required only with original generation processors. If your Z820 has the new generation V2 CPU's, then both of the embedded Z820 system NIC's can be used for ISIS 5000 / 7000 connectivity and neither the Intel PRO 1000 PT or Intel i350-T2 are required. Intel PRO 1000 PF Myricom 10G-PCIE-8B-S Myricom Dual-Port 10G-PCIE2-8B2-2S **(ISIS 5500 / 5000 v 4.7 or later)** **or** Pro Tools HDX h/w / Red Rocket Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA
4	x16 PCI-E Gen 3	x16	Local SAS Storage Controllers: Atto R680 LSI 9200-8e **or** Pro Tools HDX / HD Native / Red Rocket Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA **or** Vendor Qualified 3rd Party Hardware PCI-e Interface requiring: x8 PCI-E or greater interface / Full - Length PCI form factor
5	x4 PCI-E Gen 2	x16	Avid HIB, DX Interface HBA Active: 7030-30048-01 , 7030-30048-02 & 7030-20084-01 Passive: 7030-30021-01 **or** HP Thunderbolt-2 PCIe I/O HBA , HP Option F3F43AA http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=c04203028 **or** HP Z Turbo Drive PCIe Solid State Storage HBA
6	x16 PCI-E Gen 3	x16	Vendor Qualified 3rd Party Hardware PCI-e Interface requiring: x8 PCI-E or greater interface / Full - Length PCI form factor **or** Red Rocket Accelerator / HP Z Turbo Drive PCIe Solid State Storage HBA
7	PCI-E 32bit /33MHz	PCI 32/33	Secondary SAS Port Break-out connector (Embedded)
	Embedded Intel 82574L Gb NIC	PCI-E x1 Gen 1	Qualified for Avid ISIS 5000 / 7000 connectivity with both original and newV2 generation processors This is the NIC port adjacent to the Firewire port
	Embedded Intel 82579LM Gb NIC	PCI-E x1 Gen 1	If your Z820 has the new generation V2 CPU's, then the embedded 82579LM system NIC can be used for ISIS 5000 / 7000 connectivity. **If your Z820 has the original generation CPU's, then the embedded 82579LM system cannot be used for ISIS 5000 / 7000 connectivity.** *This is the NIC port adjacent to the blue and green audio jacks*

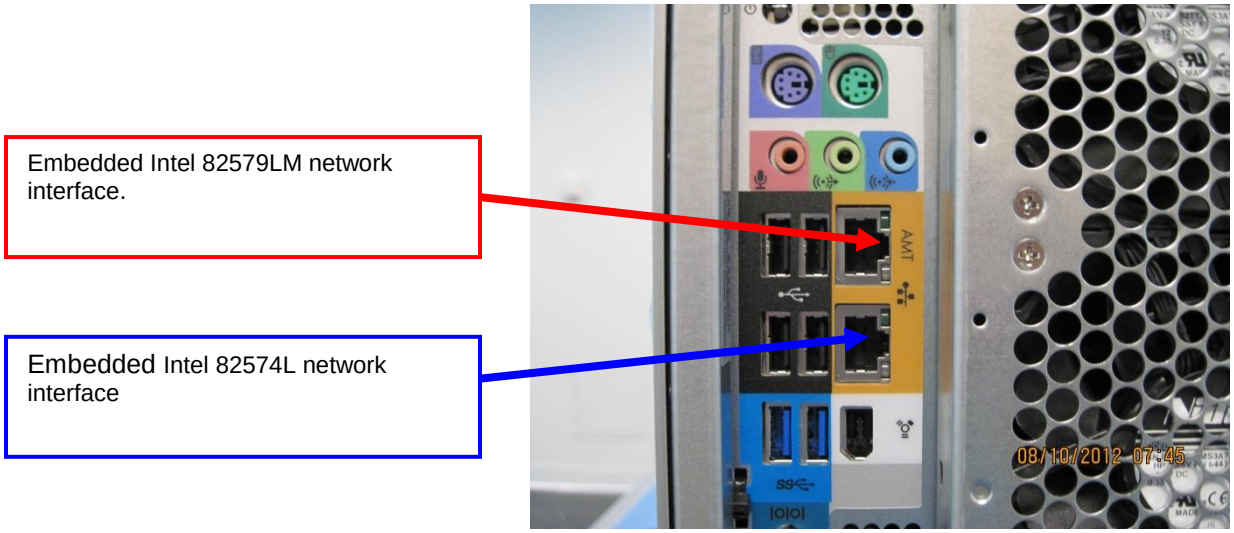
5.) Use of embedded NIC ports for ISIS connectivity **Important Information**

The Z820 has two embedded Intel NIC ports (82574L and 82579LM)..

One port is the 82574L. The 82574L port is qualified for ISIS 5000 / 7000 connectivity with both the original and new V2 generation Z820 CPU processors. Use this port for single or dual Gb connectivity to ISIS 5000 / 7000. The 82574L port is the port directly above the Firewire port.

The 2nd embedded NIC port is an 82579LM.

- If your Z820 has the new generation V2 CPU's, then the embedded 82579LM system NIC can be used for ISIS 5000 / 7000 connectivity.
- **If your Z820 has the original generation CPU's, then the embedded 82579LM system cannot be used for ISIS 5000 / 7000 connectivity.**
- The 82759LM port is marked with the letters AMT and is adjacent to the blue and green audio jacks.



For proper operation and connectivity of the Intel NIC(s) with ISIS the following settings are required:

1. Under the performance settings, change the following parameters:
   - Receive Buffers to 1024
   - Transmit Buffers to 1024

2. Disable the windows firewall.

6.) Utilization of the Z820 embedded (on-board) 1394 ports for Camera / Deck / Disk Drive support

Media Composer / Symphony 6.0 and NewsCutter 10 and later do not support Avid 1394 hardware such as Adrenaline and 1394 Mojo-SDI. This simplifies utilization of the Z820 embedded 1394 ports. The embedded 1394 ports can and should be used for all 1394 Camera / Deck / Disk Drive connectivity for all configurations running Media Composer / Symphony 5.5.x and NewsCutter 9.5.x and higher.

7.) Various Configuration Details:

A.) <u>D/X hardware configs</u> –

All versions of the DX interface HBA are supported for the Z820 with Media Composer / Symphony and NewsCutter

1) Active DX interface HBA 7030-30048-02
2) Active DX interface HBA 7030-30048-01
3) Active DX interface HBA 7030-20084-01
4) Passive DX interface HBA 7030-30021-01

Active DX interface HBA 7030-30048-01

Active DX interface HBA 7030-20084-01

Passive DX interface HBA 7030-30021-01

Active DX interface HBA 7030-30048-02

B.) Required system BIOS settings for AVID environments:

Note: *The HP Thunderbolt I/O HBA and the HP Z Turbo Drive require minimum BIOS ver 3.69 or later*

Hyper-Threading Setting:

Please Note: *CPU Hyper-threading should be enabled in all configurations per the chart below. It is currently enabled by default by HP*

	Hyper-Threading Setting	
Software Version	Dual 6-core CPU	Dual 8-core CPU
Media Composer v5.5.x , v6.x , v7.x Symphony v5.5.x , v6.x , v7.x NewsCutter v9.5.x , v10.x , v11.x	Enabled (Mandatory)	Enabled (Mandatory)

Z820 Required system BIOS changes:

1. Verify CPU Processors are set to Hyper-Threading – Set per chart above.
2. Set Memory NUMA – Disable
3. Set Runtime Power Management - Disable
4. Set Idle Power Savings - Normal

Z820 Optional system BIOS change:

1. Set Intel Turbo Mode** – Disable

** Only required if connecting USB audio I/O devices. This setting will eliminate any audio "motor-boating" or audio "popping" which may be experienced with USB audio I/O devices.

Set Z820 Required system BIOS changes:

- During boot up press F10 at the HP splash screen to invoke Set Up.

- Select the Advanced tab
- Select Device Options <Enter>
- Select Hyper-Threading
- Verify setting is Enable
    - If Hyper-Threading is set for Disable then it must be changed to Enable
- Hi F10 to save the Hyper-Threading setting

- Select the Power tab
- Select OS Power Management <return>
- Select Runtime Power Management
- Default setting is Enable
    - Change this setting from Enable to Disable

- Select Idle Power Savings
- Default setting is Extended
    - Change this setting from Extended to Normal

- Hi F10 to save the Runtime Power Management and Idle Power Savings settings

- Select Advanced Tab
- Select BUS options
- Select NUMA
- Default setting is Enable
    - Change this setting from Enable to Disable
- Hi F10 to save the NUMA setting

- Press F10 twice to Save
- Save Changes and Exit
- System will Reboot

Set Z820 Optional system BIOS setting: ** Only required if connecting USB audio I/O devices.

- Select the Power tab
- Select Hardware Power Management <Enter>
- Select Turbo Mode
- Default setting is Enable
    - Change this setting from Enable to Disable
- Press F10 twice to Save
- Save Changes and Exit

C.) Nvidia Qualified Driver:

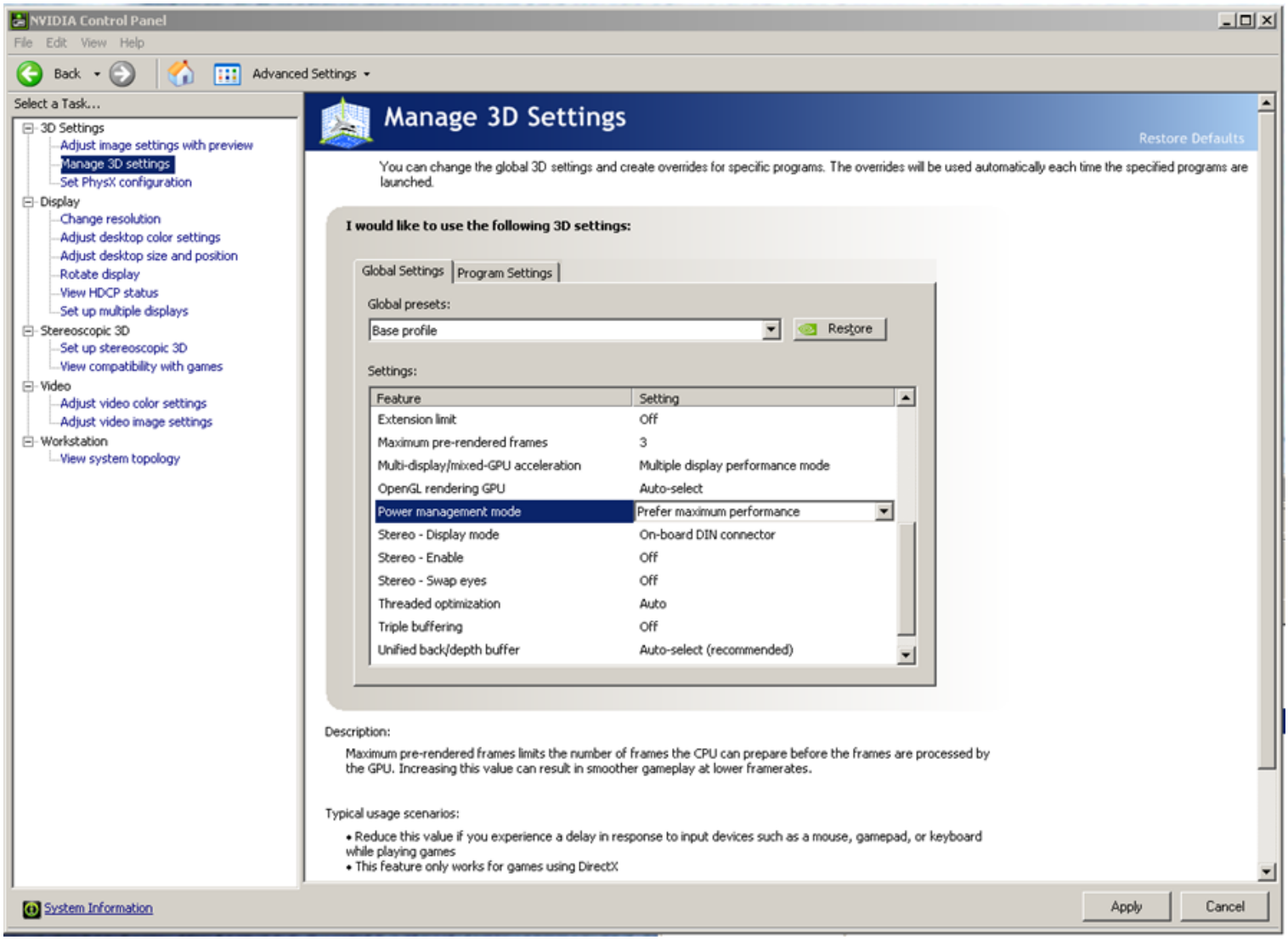
Nvidia qualified drivers

AVID Software	Version(s)	Nvidia Driver required	Nvidia GPU
Media Composer / Symphony NewsCutter	7.0 and later 11.0 and later	331.65 (mandatory for Win8.1) 320.78 (Win7 and Win8)	K4000 Quadro 4000
Media Composer / Symphony NewsCutter	6.0.3.4 and later 6.5.2.1 and later 5.5.3.7 and later (for version 5.5.x) 10.0.3.4 and later 10.5.2.1 and later	310.90	K4000 Quadro 4000
Media Composer / Symphony NewsCutter	6.0 and later 10.0 and later	275.89	Quadro 4000
Media Composer / Symphony NewsCutter	5.5.3.6 and later 9.5.3.6 and later	259.77	Quadro 4000

After installation of the AVID software the supported Nvidia driver can be found in the following directory:
Program Files / Avid / Utilities / Nvidia

Set optimized Nvidia driver settings for Avid editing environments:

1. See picture below
2. Right-Click on the desktop and select Nvidia Control Panel
3. Select Manage 3D Settings
4. Select “Global Settings” Tab
5. Under the “Global Settings” tab select “Base Profile”.
6. Scroll down and locate the “Power Management Mode” feature. The default setting is “Adaptive”. For the “Power management mode” feature, select “Prefer maximum performance” as shown in the picture below.



7. Depress the “Apply” button.

D.) Nvidia Quadro GPU monitor connectivity:

The Nvidia Quadro 4000 and K4000 graphics cards have a single DVI port and two Display-Port ports

*(Important: Display-ports **are not** HDMI ports; at first glance they do look very similar to HDMI ports)*

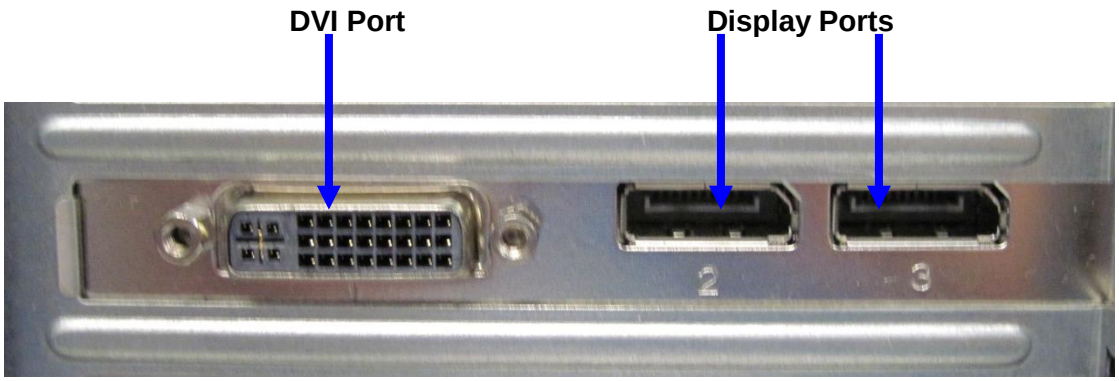
(Please Note: Only two of the three video ports can simultaneously be used. Connecting to all three video ports at the same time will result in non-functioning video output from the Nvidia GPU video card.)

The HP Z820 includes one Display-Port-to-DVI adapter. HP P/N 481409-002

For dual monitor connectivity:

1. Use the DVI port and one Display-Port (Display-Port connection can be native display-port to monitor via display-port connection, or use the display-port-to-DVI-adapter supplied with the system to connect to a native DVI monitor).

2. Or use two Display-Ports (Requires monitors with native display-port connections, two display-port to DVI adapters are not recommended when using dual display-port connections).



E.) Serial Port Deck Control:

Serial Port Deck Control:

The HP Z820 workstation does have an embedded serial port. The embedded serial-port has been qualified by Avid and will maintain frame accuracy in Avid environments. Primary or secondary / additional serial port deck control can be established via two methods (both of which have been qualified by Avid and will maintain frame accuracy in Avid environments)

1. Addenda model **RS-USB / 4** direct USB-to-RS422 serial adapter. This is a simple device which connects directly from a USB port of the Z820 directly to the RS422 port of a deck.
   http://www.addenda.com/addenda-elect/products/rsUSB4.php

2. Combination of a Keyspan (Tripp-Lite) Model USA-19HS USB-to-serial-port adapter with Addenda Rosetta Stone model RS – 2/8 RS232-to-RS422 converter

   - Keyspan (Tripp-Lite) Model USA-19HS (AVID P/N 7080-20013-01)
     http://www.tripplite.com/en/products/model.cfm?txtSeriesID=518&EID=13384&txtModelID=3914
   - Addenda Rosetta Stone (or equivalent) model RS – 2/8 RS232-to-RS422 converter (AVID P/N 7070-00507-01)
     http://www.addenda.com/addenda-elect/products/rs28.php

To connect the Keyspan 19HS / Addenda RS -2/8 combination:

- Install the Keyspan 19HS driver before plugging the device into a Z820 USB port.
- Once the Keyspan 19HS driver is installed then plug the Keyspan 19HS into a Z820 USB port.
- The Keyspan 19HS will now show up in device driver.
- Using a serial cable, connect the 9-pin serial port of the Keyspan 19HS USB adapter to the port of the Addenda marked RS232 from PC
- Using a 2nd serial port cable connect the port of the Addenda marked “RS422 to VTR” to the deck control serial port of the deck.

F.) O.S. setting recommendations for optimum performance with Avid Editing applications:

The following links provide O.S. setting suggestions for ensuring optimum performance when working with your Avid editing application with a Windows operating system.

- Optimizations for Video Editors

  http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=390339

G.) Supported external local SAS storage connectivity via embedded SAS controller ports:

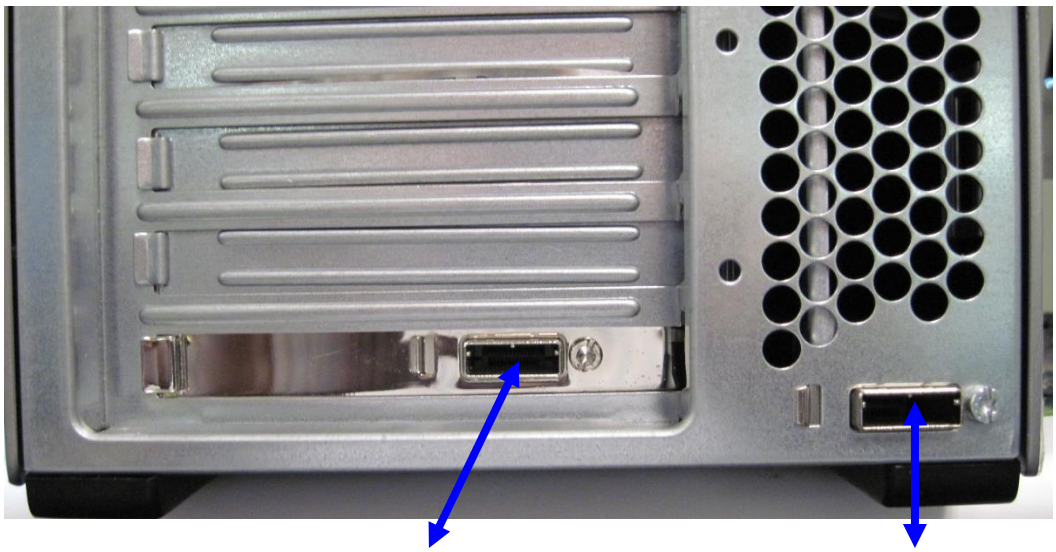
Supported

- **AVID VideoRAID SR (16-bay)**
- **Xtore StudioRAID 16Re (16-bay) / 5Te (5-bay) chassis**

The Z820 can support:

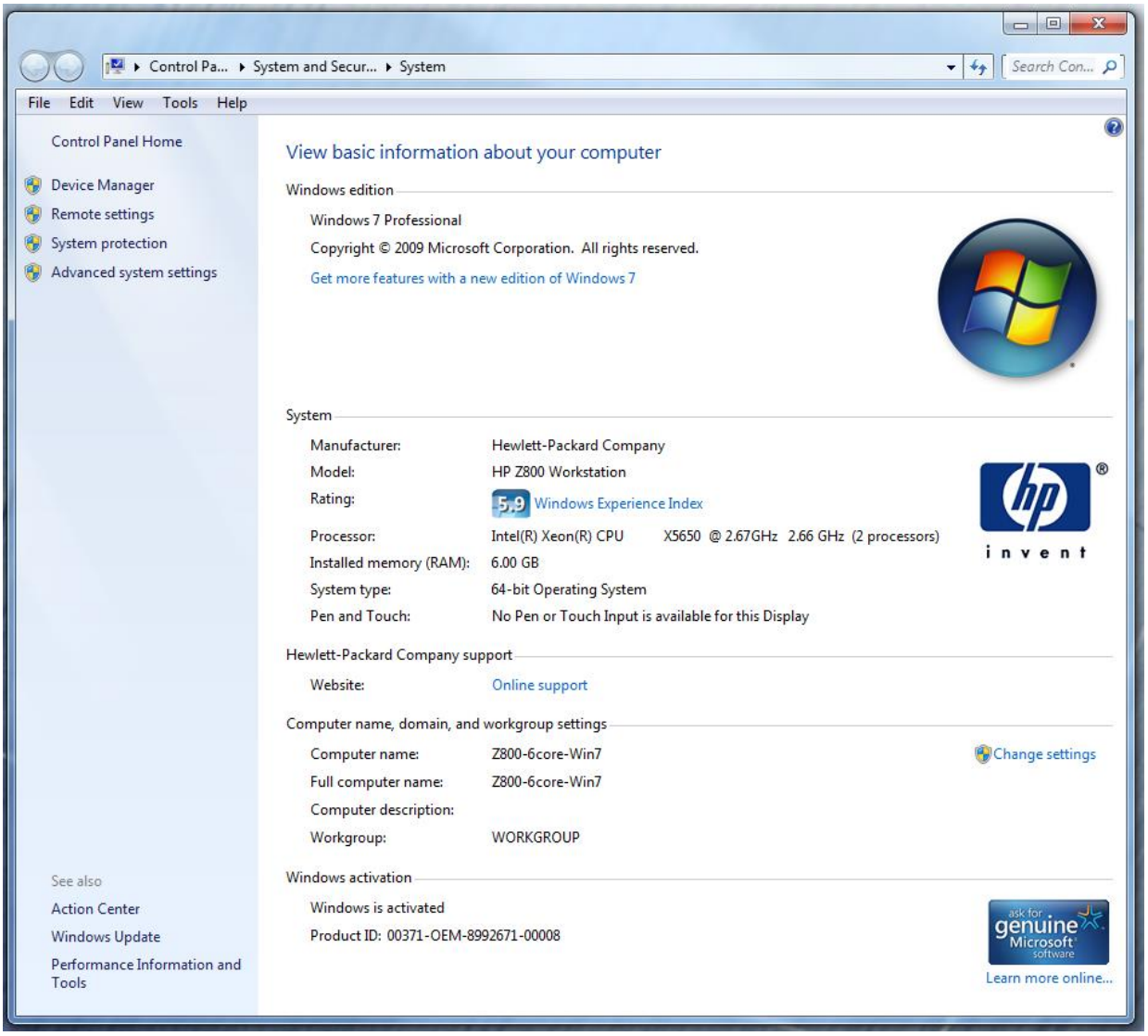
a. Up to two external AVID VideoRAID SR (16-bay) SAS local storage chassis
b. Mix and match of up to two external Xtore StudioRAID 16Re (16-bay) / 5Te (5-bay) chassis

Simultaneous connectivity of AVID VideoRAID and Xtore chassis is not formally qualified or recommended.



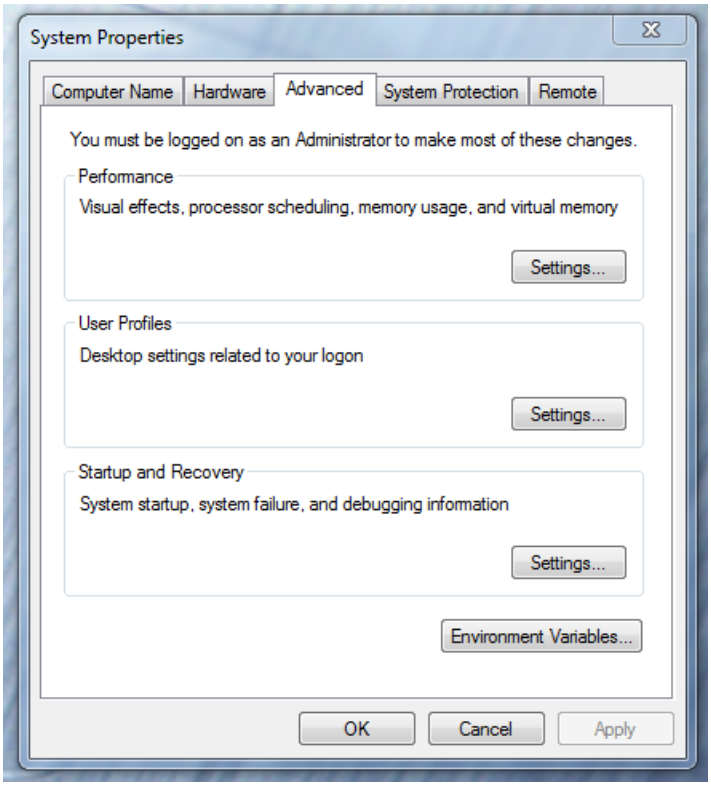
H.) Set Windows “Visual Effects” for “best performance”:

1. Right-Click on My Computer / Computer
2. Select Properties
3. The screen below will be displayed:

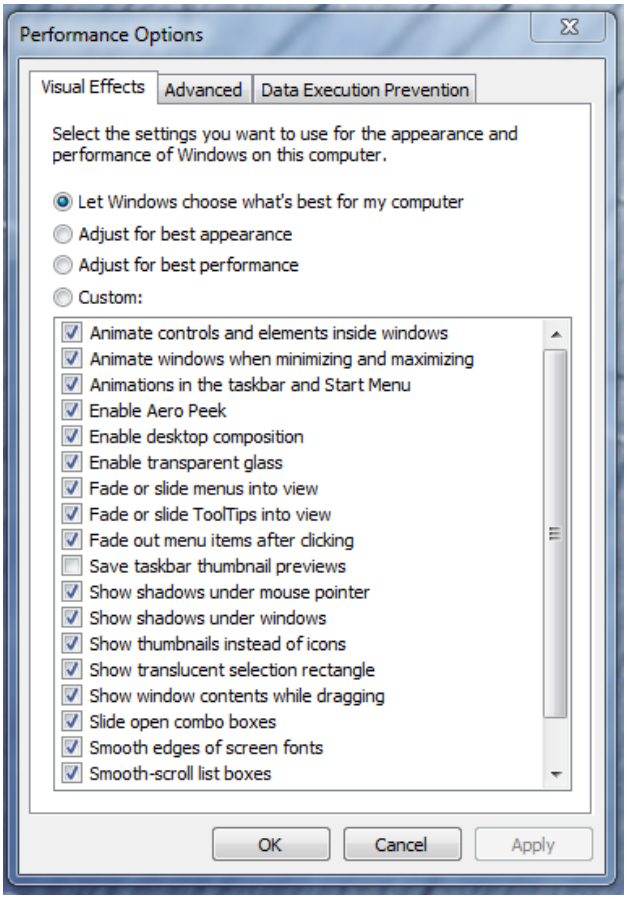

Control Pa... ▸ System and Secur... ▸ System
Search Con...
File Edit View Tools Help
Control Panel Home
Device Manager
Remote settings
System protection
Advanced system settings
View basic information about your computer
Windows edition
Windows 7 Professional
Copyright © 2009 Microsoft Corporation. All rights reserved.
Get more features with a new edition of Windows 7
System
Manufacturer: Hewlett-Packard Company
Model: HP Z800 Workstation
Rating: 5.9 Windows Experience Index
Processor: Intel(R) Xeon(R) CPU X5650 @ 2.67GHz 2.66 GHz (2 processors)
Installed memory (RAM): 6.00 GB
System type: 64-bit Operating System
Pen and Touch: No Pen or Touch Input is available for this Display
invent
Hewlett-Packard Company support
Website: Online support
Computer name, domain, and workgroup settings
Computer name: Z800-6core-Win7
Full computer name: Z800-6core-Win7
Computer description:
Workgroup: WORKGROUP
Change settings
Windows activation
Windows is activated
Product ID: 00371-OEM-8992671-00008
ask for genuine Microsoft software
Learn more online...
See also
Action Center
Windows Update
Performance Information and Tools

4. On the left side of the screen above, locate and select “Advanced system settings”

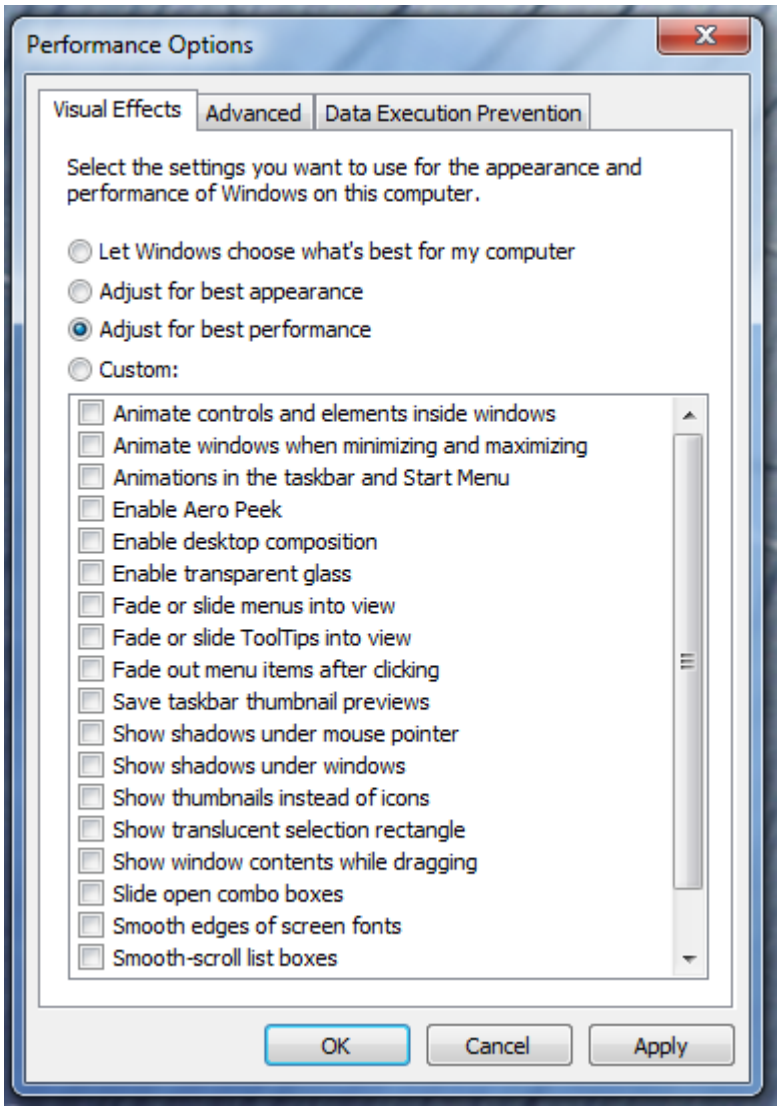
5. The System properties window will be displayed. (Picture below).



6. Under the “Advanced” tab depress the “Settings...” button for performance.
7. The “performance Options” window will be displayed. (Picture below).


Performance Options
Visual Effects
Advanced
Data Execution Prevention
Select the settings you want to use for the appearance and performance of Windows on this computer.
Let Windows choose what's best for my computer
Adjust for best appearance
Adjust for best performance
Custom:
Animate controls and elements inside windows
Animate windows when minimizing and maximizing
Animations in the taskbar and Start Menu
Enable Aero Peek
Enable desktop composition
Enable transparent glass
Fade or slide menus into view
Fade or slide ToolTips into view
Fade out menu items after clicking
Save taskbar thumbnail previews
Show shadows under mouse pointer
Show shadows under windows
Show thumbnails instead of icons
Show translucent selection rectangle
Show window contents while dragging
Slide open combo boxes
Smooth edges of screen fonts
Smooth-scroll list boxes
OK
Cancel
Apply

8. Under the “Visual Effects” tab select the “Adjust for best performance” selection. (Picture below).


Performance Options
Visual Effects
Advanced
Data Execution Prevention
Select the settings you want to use for the appearance and performance of Windows on this computer.
Let Windows choose what's best for my computer
Adjust for best appearance
Adjust for best performance
Custom:
Animate controls and elements inside windows
Animate windows when minimizing and maximizing
Animations in the taskbar and Start Menu
Enable Aero Peek
Enable desktop composition
Enable transparent glass
Fade or slide menus into view
Fade or slide ToolTips into view
Fade out menu items after clicking
Save taskbar thumbnail previews
Show shadows under mouse pointer
Show shadows under windows
Show thumbnails instead of icons
Show translucent selection rectangle
Show window contents while dragging
Slide open combo boxes
Smooth edges of screen fonts
Smooth-scroll list boxes
OK
Cancel
Apply

9. Depress the “Apply” button
10. Reboot Windows
11. Required Windows visual performance settings for Avid environments are now complete.

I.) Intel NIC Port(s) for ISIS connectivity:

Embedded 82574L and 82579LM ports / Intel PRO 1000 Dual Gb HBA / Intel i350-T2 Dual Gb NIC HBA

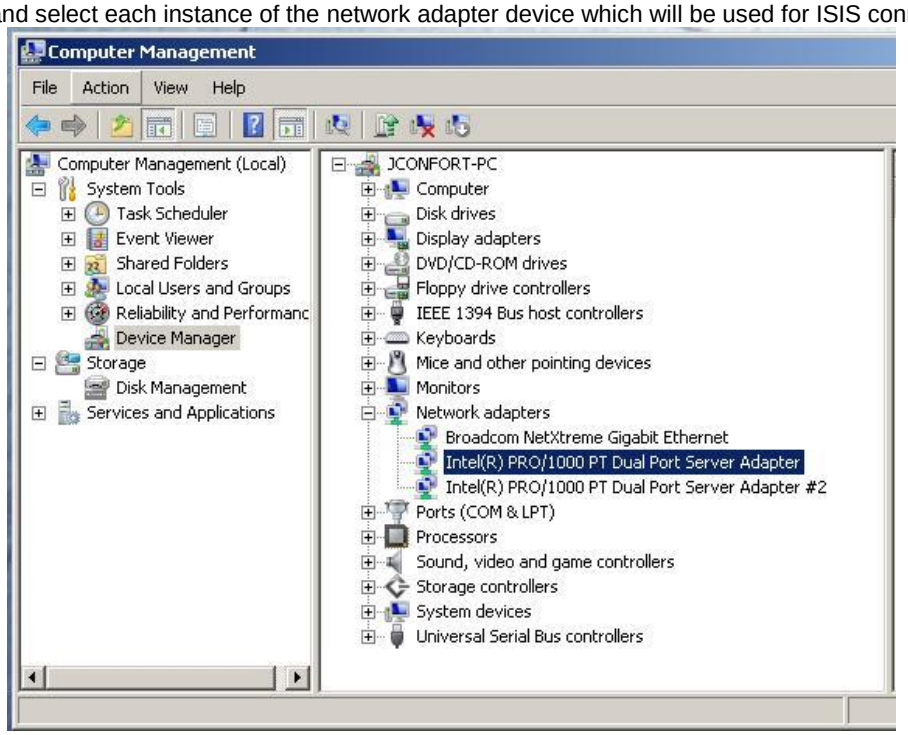
For proper operation and connectivity of any Intel NIC port used with ISIS the settings below are required. Example below is for the Intel PRO 1000 PT.

1. For the performance settings, change the following parameters:
   - Receive Buffers to 1024
   - Transmit Buffers to 1024

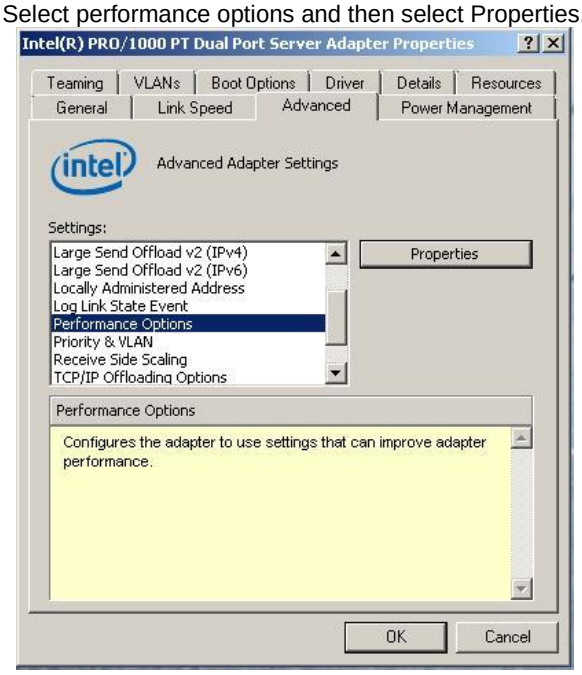
2. Disable the windows firewall.

To set the Intel NIC Receive / Transmit buffers:

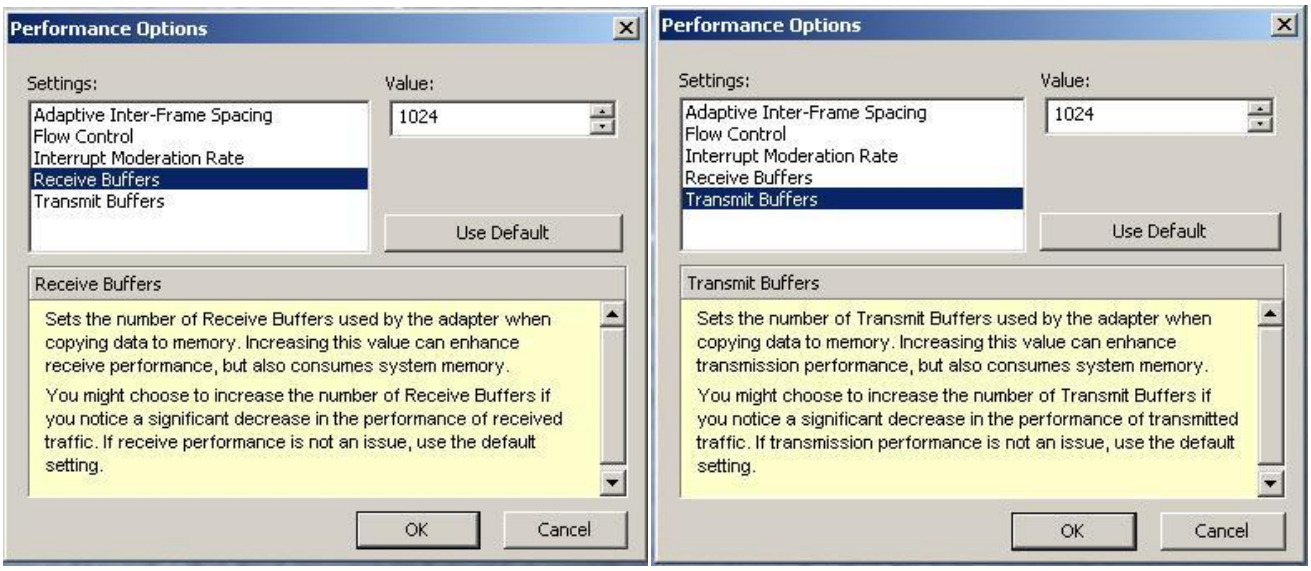
Go to device manager and select each instance of the network adapter device which will be used for ISIS connectivity.



Select performance options and then select Properties.



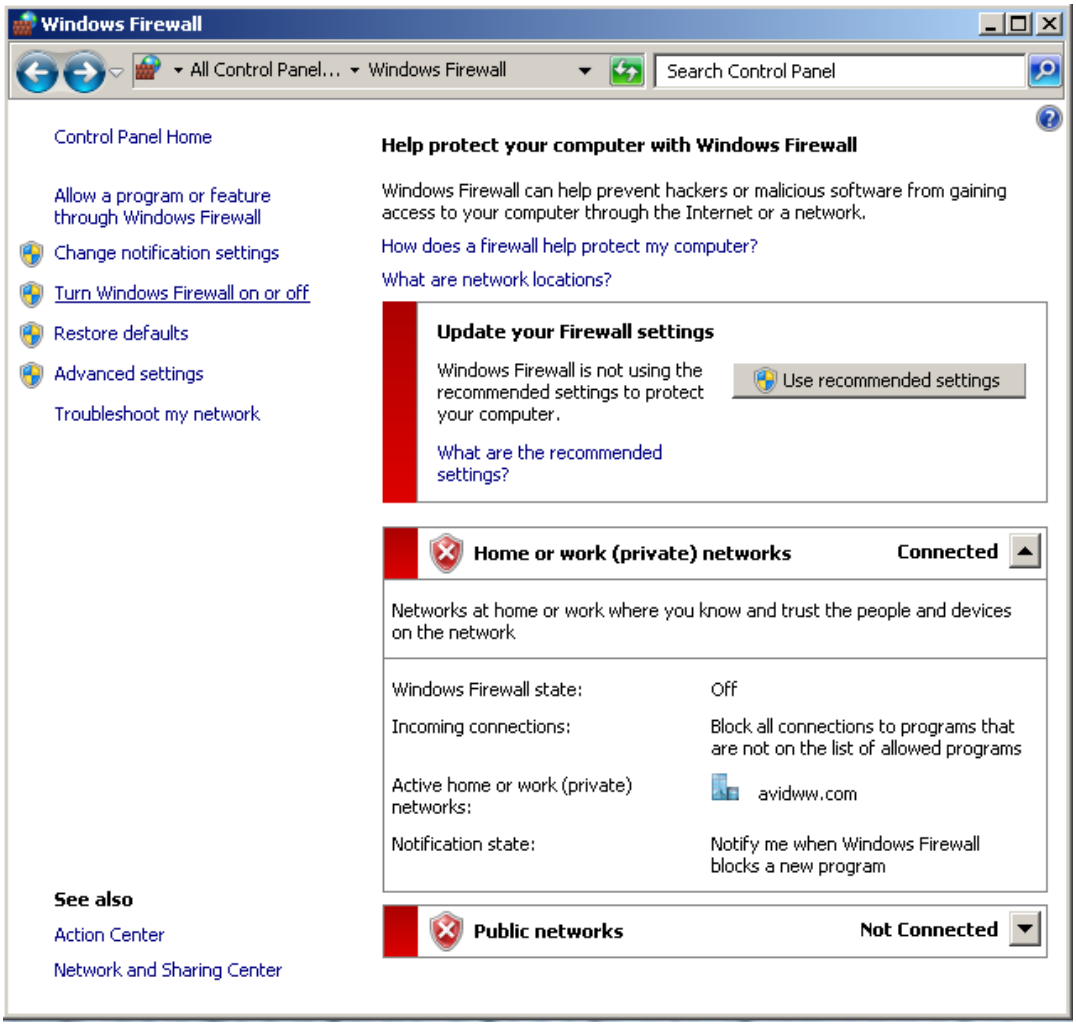
Set Receive Buffers to 1024 Set Transmit Buffers to 1024


Performance Options
Settings:
Value:
Adaptive Inter-Frame Spacing
Flow Control
Interrupt Moderation Rate
Receive Buffers
Transmit Buffers
1024
Use Default
Receive Buffers
Sets the number of Receive Buffers used by the adapter when copying data to memory. Increasing this value can enhance receive performance, but also consumes system memory.
You might choose to increase the number of Receive Buffers if you notice a significant decrease in the performance of received traffic. If receive performance is not an issue, use the default setting.
OK
Cancel
Performance Options
Settings:
Value:
Adaptive Inter-Frame Spacing
Flow Control
Interrupt Moderation Rate
Receive Buffers
Transmit Buffers
1024
Use Default
Transmit Buffers
Sets the number of Transmit Buffers used by the adapter when copying data to memory. Increasing this value can enhance transmission performance, but also consumes system memory.
You might choose to increase the number of Transmit Buffers if you notice a significant decrease in the performance of transmitted traffic. If transmission performance is not an issue, use the default setting.
OK
Cancel

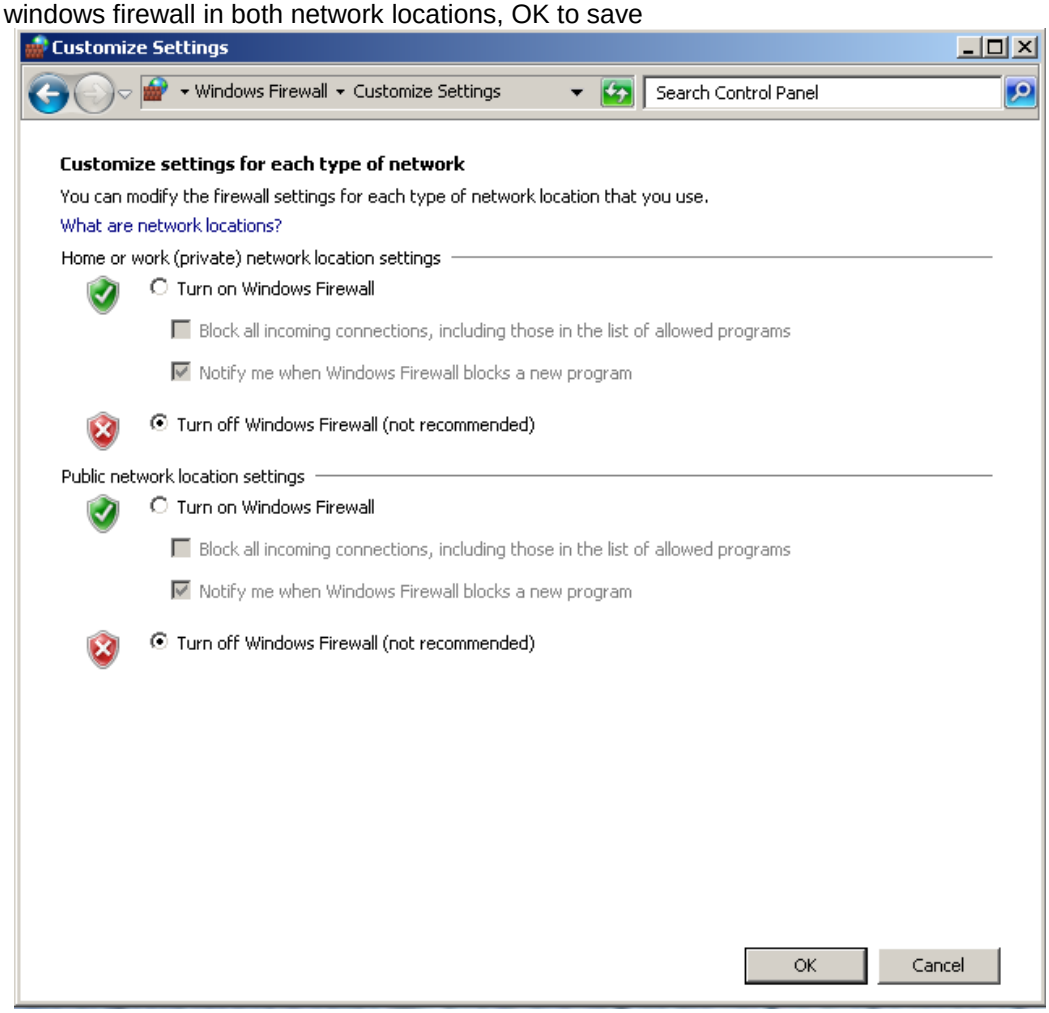
Perform this for each instance of and Intel NIC port which will be used for ISIS connectivity.

J.) Disable the windows firewall:

Navigate to Control Panel / Windows Firewall -- Select Turn Windows Firewall on or off


Windows Firewall
All Control Panel... Windows Firewall
Search Control Panel
Control Panel Home
Allow a program or feature through Windows Firewall
Change notification settings
Turn Windows Firewall on or off
Restore defaults
Advanced settings
Troubleshoot my network
Help protect your computer with Windows Firewall
Windows Firewall can help prevent hackers or malicious software from gaining access to your computer through the Internet or a network.
How does a firewall help protect my computer?
What are network locations?
Update your Firewall settings
Windows Firewall is not using the recommended settings to protect your computer.
Use recommended settings
What are the recommended settings?
Home or work (private) networks
Connected
Networks at home or work where you know and trust the people and devices on the network
Windows Firewall state:
Off
Incoming connections:
Block all connections to programs that are not on the list of allowed programs
Active home or work (private) networks:
avidww.com
Notification state:
Notify me when Windows Firewall blocks a new program
See also
Action Center
Network and Sharing Center
Public networks
Not Connected

Select Turn off windows firewall in both network locations, OK to save


Customize Settings
Windows Firewall ▸ Customize Settings
Search Control Panel
Customize settings for each type of network
You can modify the firewall settings for each type of network location that you use.
What are network locations?
Home or work (private) network location settings
Turn on Windows Firewall
Block all incoming connections, including those in the list of allowed programs
Notify me when Windows Firewall blocks a new program
Turn off Windows Firewall (not recommended)
Public network location settings
Turn on Windows Firewall
Block all incoming connections, including those in the list of allowed programs
Notify me when Windows Firewall blocks a new program
Turn off Windows Firewall (not recommended)
OK
Cancel

Revision Update

Revision	Date	Name	Update
A Initial Release	Sept 18th, 2012	Joe Conforti	Initial release of the Z820 configuration guide for support of Media Composer 6.x, Symphony 6.x and NewsCutter 10.x
B	Dec 27th, 2012	Joe Conforti	Added additional support for the 6-Core Xeon® E5-2640 @ 2.5GHz Processors which are now qualified for Media Composer 5.5.3.6, Symphony 5.5.3.6 and NewsCutter 9.5.3.6 or higher. **Added note clearly stating that the 8-Core Xeon® E5-2665 Processors @ 2.4GHz 20MB cache are qualified only for Media Composer 6.x , Symphony 6.x and NewsCutter 10 or higher** Added support for 32GB memory Defined different video driver settings for ver 275.89 (used with Media Composer / Symphony 6.x and NewsCutter 10.x) ver 257.99 (used with Media Composer / Symphony 5.5.x and NewsCutter 9.5.x) Stated BIOS ver 1.14 and ver 2.08 are qualified
C	Jan 24th, 2013	Joe Conforti	Added additional memory configurations using 4GB DIMMs, corrected naming convention for Pro Tools hardware (HDX , HDX / HD Native)
D	May 1st, 2013	Joe Conforti	Added support for Nvidia K4000 GPU, Nvidia driver ver 310.90, changed KB link for system BIOS info, added supported system

			BIOS versions, misc. corrections
E	Jan 16th 2014	Joe Conforti	Added Win8 support, Professional and Enterprise Added support for V2 CPU's, 6-core, 8-core and 12-core Added mandatory 32GB memory config for 12-core CPU Utilization of embedded NIC ports for ISIS has changed with the V2 CPU's, detailed information added for ISIS connectivity. Added support for Nvidia drivers ver 320.78 and 331.65. Ver 331.65 is mandatory for Win 8.1 Simplified required Nvidia settings
F	August 6th 2014	Joe Conforti	Added support for HP Thunderbolt-2 HBA, HP Z Turbo Solid State PCIe drive, and Myricom Dual-Port 10Gb PCIE2-8B2-2S HBA